

1/04/05

L7        STRUCTURE UPLOADED

=> d l7

L7 HAS NO ANSWERS

L7                STR

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

Structure attributes must be viewed using STN Express query preparation.

=> s l7 ful

FULL SEARCH INITIATED 14:52:59 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 9581 TO ITERATE

100.0% PROCESSED        9581 ITERATIONS

5 ANSWERS

SEARCH TIME: 00.00.01

L8                5 SEA SSS FUL L7

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

161.33

485.51

FILE 'CAPLUS' ENTERED AT 14:53:07 ON 04 JAN 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE COVERS 1907 - 4 Jan 2005 VOL 142 ISS 2

FILE LAST UPDATED: 3 Jan 2005 (20050103/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l8

L9                2 L8

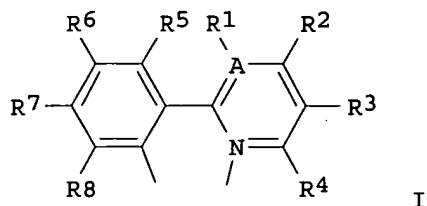
=> d abs bib hitstr 1-2

L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN

GI

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1/04/05



AB Organic electroluminescent devices are described which employ an emitting layer comprising  $\geq 20$  weight % pf  $\geq 1$  compound described by the general formula  $\text{IrLaLbLcXL'yL}^{\text{z}}$  ( $x = 0$  or  $1$ ,  $y = 0$ ,  $1$ , or  $2$ , and  $z = 0$  or  $1$ , with the proviso that  $x = 0$  or  $y + z = 0$  and when  $y = 2$  then  $z = 0$ ;  $\text{L}' =$  a bidentate ligand or a monodentate ligand, and is not a phenylpyridine, phenylpyrimidine, or phenylquinoline with the proviso that: when  $\text{L}'$  is a monodentate ligand,  $y + z = 2$ , and when  $\text{L}'$  is a bidentate ligand,  $z = 0$ ;  $\text{L}'' =$  a monodentate ligand, and is not a phenylpyridine, and phenylpyrimidine, or phenylquinoline; and  $\text{La}$ ,  $\text{Lb}$ , and  $\text{Lc}$  the same or different compds. are described by the general formula I; adjacent pairs of  $\text{R1-4}$  and  $\text{R5-8}$  can be joined to form a five- or six-membered ring, at least one of  $\text{R1-8}$  is selected from  $\text{F}$ ,  $\text{CnF2n+1}$ ,  $\text{OCnF2n+1}$ , and  $\text{OCF2X}$ ;  $n = 1-6$ ; and  $\text{X} = \text{H}$ ,  $\text{Cl}$ , or  $\text{Br}$ , and  $\text{A} = \text{C}$  or  $\text{N}$ , provided that when  $\text{A} = \text{N}$ , there is no  $\text{R1}$ ). The electroluminescent compds. as well as selected substituted 2-phenylpyridines, phenylpyrimidines, and phenylquinolines that may be used to make the compds. are also described.

AN 2002:31593 CAPLUS

DN 136:93307

TI Electroluminescent iridium compounds with fluorinated phenylpyridines, phenylpyrimidines, and phenylquinolines and devices made with such compounds

IN Petrov, Viacheslav A.; Wang, Ying; Grushin, Vladimir

PA E. I. Du Pont de Nemours & Co., USA

SO PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002002714	A2	20020110	WO 2001-US20539	20010627
	WO 2002002714	A3	20021024		
	W:			AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM	
	RW:			GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG	
	CA 2411624	AA	20020110	CA 2001-2411624	20010627
	AU 2001071550	A5	20020114	AU 2001-71550	20010627
	EP 1295514	A2	20030326	EP 2001-950576	20010627
	R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR	
	JP 2004503059	T2	20040129	JP 2002-507959	20010627
	EP 1424382	A2	20040602	EP 2004-4541	20010627
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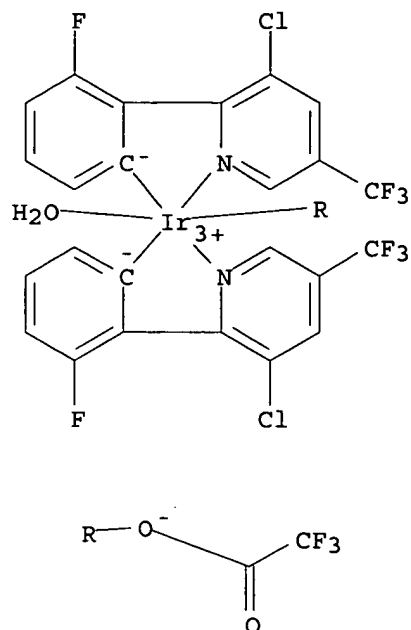
10724766

1/04/05

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EP 1431288 A2 20040623 EP 2004-4542 20010627  
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IE, FI, CY, TR  
EP 1431289 A2 20040623 EP 2004-4543 20010627  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, FI, CY, TR  
WO 2003063555 A1 20030731 WO 2001-US49522 20011226  
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,  
PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,  
US, UZ, VN, YU, ZA, ZW  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,  
GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,  
GN, GQ, GW, ML, MR, NE, SN, TD, TG  
EP 1466506 A1 20041013 EP 2001-991428 20011226  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  
US 2004075096 A1 20040422 US 2003-720967 20031124  
US 2004116696 A1 20040617 US 2003-720954 20031124  
PRAI US 2000-215362P P 20000630  
US 2000-224273P P 20000810  
US 2001-879014 B1 20010612  
EP 2001-950576 A3 20010627  
WO 2001-US20539 W 20010627  
WO 2001-US49522 W 20011226  
US 2003-366295 A3 20030213  
OS MARPAT 136:93307  
IT 387859-65-6P  
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic  
preparation); PREP (Preparation); USES (Uses)  
(electroluminescent devices based on iridium compds. with fluorinated  
phenylpyridines and phenylpyrimidines and phenylquinolines and the  
compds. and their precursors)  
RN 387859-65-6 CAPLUS  
CN Iridium, aquabis[2-[3-chloro-5-(trifluoromethyl)-2-pyridinyl-κN]-3-  
fluorophenyl-κC](trifluoroacetato-κO)- (9CI) (CA INDEX NAME)

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1/04/05



L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN  
AB Complexes of the type  $[\text{Ir}(\text{L})_2(\text{S})_2][\text{OTf}]$  have been prepared by reactions of  $[\text{Ir}(\text{L})_2\text{Cl}]_2$  with  $\text{AgOTf}$  in an appropriate solvent medium ( $\text{L}$  = 2-phenylpyridine (ppy) or 2-(p-tolyl)pyridine (ptpy);  $\text{S}$  =  $\text{H}_2\text{O}$  or  $\text{CH}_3\text{CN}$ ;  $\text{OTf}$  =  $\text{CF}_3\text{SO}_3^-$ ). These solvento complexes have been characterized by  $^1\text{H}$  and  $^{13}\text{C}$  NMR spectroscopies, UV-visible absorption and emission spectroscopies, and cyclic voltammetry. Ests. of radiative lifetimes based upon weak integrated absorption bands in the 460-490-nm region are in agreement with emission lifetimes monitored in glasses at 77 K. Low-lying excited states responsible for these absorption and emission bands are assigned to an admixt. of ligand-localized and metal-to-ligand charge-transfer character. Quenching of the emissions in ambient solns. is discussed in terms of ligand labilization due to either thermal population of metal-centered excited states or direct labilization in the MLCT excited state due to enhanced trans effects of the Ir-C bonds on the Ir-S bonding.

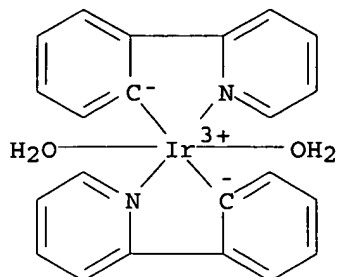
AN 1994:164463 CAPLUS  
DN 120:164463  
TI Synthesis and characterizations of cyclometalated iridium(III) solvento complexes  
AU Schmid, B.; Garces, F. O.; Watts, R. J.  
CS Dep. Chem., Univ. California, Santa Barbara, CA, 93106, USA  
SO Inorganic Chemistry (1994), 33(1), 9-14  
CODEN: INOCAJ; ISSN: 0020-1669  
DT Journal  
LA English  
IT 153297-46-2P 153297-48-4P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and spectra)  
RN 153297-46-2 CAPLUS  
CN Iridium(1+), diaquabis[2-(2-pyridinyl)phenyl-C,N]-, (OC-6-33)-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

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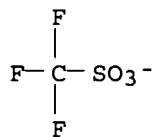
1/04/05

CRN 153297-45-1  
CMF C22 H20 Ir N2 O2  
CCI CCS



CM 2

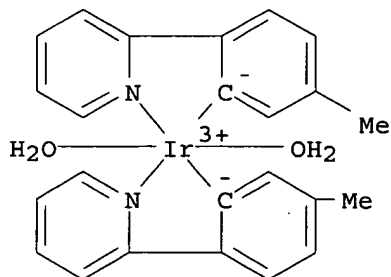
CRN 37181-39-8  
CMF C F3 O3 S



RN 153297-48-4 CAPLUS  
CN Iridium(1+), diaquabis[5-methyl-2-(2-pyridinyl)phenyl-C,N]-, (OC-6-33)-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 153297-47-3  
CMF C24 H24 Ir N2 O2  
CCI CCS



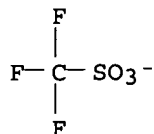
CM 2

CRN 37181-39-8

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1/04/05

CMF C F3 O3 S



=> file uspatall

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	11.68	497.19

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-1.46	-1.46

FILE 'USPATFULL' ENTERED AT 14:55:31 ON 04 JAN 2005  
CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 14:55:31 ON 04 JAN 2005  
CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

=> d his

(FILE 'HOME' ENTERED AT 14:49:17 ON 04 JAN 2005)

FILE 'REGISTRY' ENTERED AT 14:49:25 ON 04 JAN 2005

L1 STRUCTURE UPLOADED

L2 0 S L1

L3 0 S L1 FUL

L4 STRUCTURE UPLOADED

L5 1013 S L4 FUL

FILE 'CAPLUS' ENTERED AT 14:51:39 ON 04 JAN 2005

L6 620 S L5

FILE 'REGISTRY' ENTERED AT 14:52:31 ON 04 JAN 2005

L7 STRUCTURE UPLOADED

L8 5 S L7 FUL

FILE 'CAPLUS' ENTERED AT 14:53:07 ON 04 JAN 2005

L9 2 S L8

FILE 'USPATFULL, USPAT2' ENTERED AT 14:55:31 ON 04 JAN 2005

=> s 19

L10 10 L9

=> s 18

L11 10 L8

=> d abs bib hitstr 1-10

L11 ANSWER 1 OF 10 USPATFULL on STN

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1/04/05

AB The present invention is generally directed to electroluminescent Ir(III) compounds, the substituted 2-phenylpyridines, phenylpyrimidines, and phenylquinolines that are used to make the Ir(III) compounds, and devices that are made with the Ir(III) compounds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AN 2004:247364 USPATFULL

TI Electroluminescent iridium compounds with fluorinated phenylpyridines, phenylpyrimidines, and phenylquinolines and devices made with such compounds

IN Grushin, Vladimir, Hockessin, DE, UNITED STATES  
Lecloux, Daniel D., Buellton, CA, UNITED STATES  
Petrov, Viacheslav A., Hockessin, DE, UNITED STATES  
Wang, Ying, Wilmington, DE, UNITED STATES

PI US 2004191959 A1 20040930

AI US 2003-696401 A1 20031029 (10)

RLI Division of Ser. No. US 2001-27421, filed on 20 Dec 2001, GRANTED, Pat. No. US 6670645 Continuation-in-part of Ser. No. US 2001-879014, filed on 12 Jun 2001, ABANDONED

PRAI US 2000-215362P 20000630 (60)

US 2000-224273P 20000810 (60)

DT Utility

FS APPLICATION

LREP E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT RECORDS CENTER, BARLEY MILL PLAZA 25/1128, 4417 LANCASTER PIKE, WILMINGTON, DE, 19805

CLMN Number of Claims: 5

ECL Exemplary Claim: CLM-01-11

DRWN 1 Drawing Page(s)

LN.CNT 1603

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

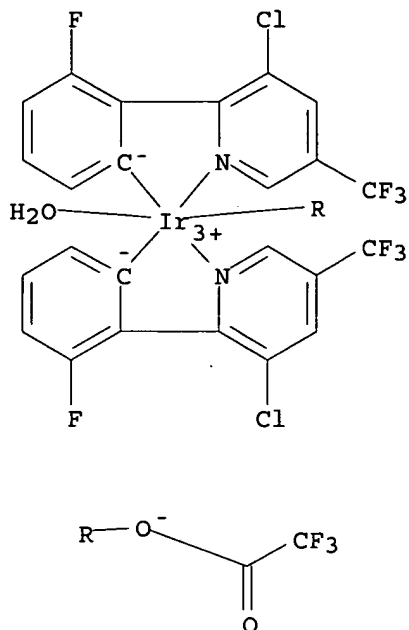
IT 387859-65-6P

(electroluminescent devices based on iridium compds. with fluorinated phenylpyridines and phenylpyrimidines and phenylquinolines and the compds. and their precursors)

RN 387859-65-6 USPATFULL

CN Iridium, aquabis[2-[3-chloro-5-(trifluoromethyl)-2-pyridinyl-κN]-3-fluorophenyl-κC](trifluoroacetato-κO)- (9CI) (CA INDEX NAME)

1/04/05



L11 ANSWER 2 OF 10 USPATFULL on STN

AB The present invention is generally directed to electroluminescent Ir(III) compounds, the substituted 2-phenylpyridines, phenylpyrimidines, and phenylquinolines that are used to make the Ir(III) compounds, and devices that are made with the Ir(III) compounds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AN 2004:244086 USPATFULL

TI Electroluminescent iridium compounds with fluorinated phenylpyridines, phenylpyrimidines, and phenylquinolines and devices made with such compounds

IN       Grushin, Vladimir, Hockessin, DE, UNITED STATES  
          LeCloux, Daniel David, Buellton, CA, UNITED STATES  
          Petrov, Viacheslav A., Hockessin, DE, UNITED STATES  
          Wang, Ying, Wilmington, DE, UNITED STATES

PI US 2004188673 A1 20040930

AI US 2003-696060 A1 20031029 (10)

RLI Division of Ser. No. US 2001-27421, filed on 20 Dec 2001, GRANTED, Pat.  
No. US 6670645 Continuation-in-part of Ser. No. US 2001-879014, filed on  
12 Jun 2001, ABANDONED

PRAI US 2000-215362P 20000630 (60)

US 2000-224273P      20000810 (60)

DT      Utility

FS APPLICATION

LREP E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT RECORDS CENTER, BARLEY  
MILL PLAZA 25/1128, 4417 LANCASTER PIKE, WILMINGTON, DE, 19805

CLMN Number of Claims: 8

ECL Exemplary Claim: CLM-01-11

DRWN 1 Drawing Page(s)

LN.CNT 1623

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 387859-65-6P

(electroluminescent devices based on iridium compds. with fluorinated phenylpyridines and phenylpyrimidines and phenylquinolines and the

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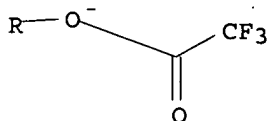
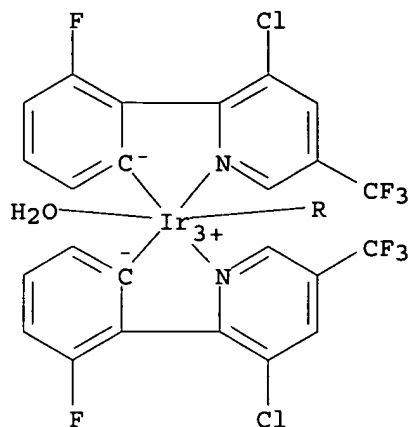


1/04/05

compds. and their precursors)

RN 387859-65-6 USPATFULL

CN Iridium, aquabis[2-[3-chloro-5-(trifluoromethyl)-2-pyridinyl-κN]-3-fluorophenyl-κC](trifluoroacetato-κO) - (9CI) (CA INDEX NAME)



L11 ANSWER 3 OF 10 USPATFULL on STN

AB The present invention is generally directed to electroluminescent Ir(III) compounds, the substituted 2-phenylpyridines, phenylpyrimidines, and phenylquinolines that are used to make the Ir(III) compounds, and devices that are made with the Ir(III) compounds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AN 2004:152474 USPATFULL

TI Electroluminescent iridium compounds with fluorinated phenylpyridines, phenylpyrimidines, and phenylquinolines and devices made with such compounds

IN Grushin, Vladimir, Hockessin, DE, UNITED STATES

Petrov, Viacheslav A., Hockessin, DE, UNITED STATES

Wang, Ying, Wilmington, DE, UNITED STATES

PI US 2004116696 A1 20040617

AI US 2003-720954 A1 20031124 (10)

RLI Division of Ser. No. US 2003-366295, filed on 13 Feb 2003, PENDING

Continuation of Ser. No. US 2001-879014, filed on 12 Jun 2001, ABANDONED

PRAI US 2000-215362P 20000630 (60)

US 2000-224273P 20000810 (60)

DT Utility

FS APPLICATION

LREP E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT RECORDS CENTER, BARLEY MILL PLAZA 25/1128, 4417 LANCASTER PIKE, WILMINGTON, DE, 19805

CLMN Number of Claims: 22

ECL Exemplary Claim: 1

DRWN 1 Drawing Page(s)

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1/04/05

LN.CNT 1155

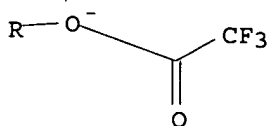
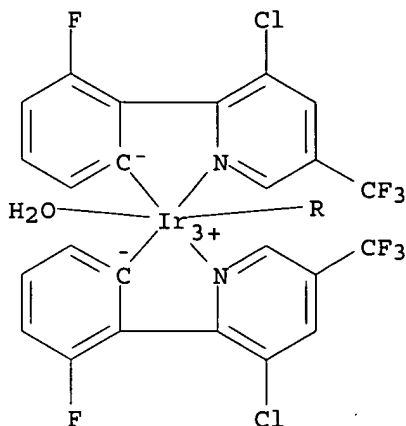
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 387859-65-6P

(electroluminescent devices based on iridium compds. with fluorinated phenylpyridines and phenylpyrimidines and phenylquinolines and the compds. and their precursors)

RN 387859-65-6 USPATFULL

CN Iridium, aquabis[2-[3-chloro-5-(trifluoromethyl)-2-pyridinyl-κN]-3-fluorophenyl-κC](trifluoroacetato-κO)- (9CI) (CA INDEX NAME)



L11 ANSWER 4 OF 10 USPATFULL on STN

AB The present invention is generally directed to electroluminescent Ir(III) compounds, the substituted 2-phenylpyridines, phenylpyrimidines, and phenylquinolines that are used to make the Ir(III) compounds, and devices that are made with the Ir(III) compounds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AN 2004:142853 USPATFULL

TI Electroluminescent iridium compounds with fluorinated phenylpyridines, phenylpyrimidines, and phenylquinolines and devices made with such compounds

IN Grushin, Vladimir, Hockessin, DE, UNITED STATES

Lecloux, Daniel D., Buellton, CA, UNITED STATES

Petrov, Viacheslav A., Hockessin, DE, UNITED STATES

Wang, Ying, Wilmington, DE, UNITED STATES

PI US 2004108507 A1 20040610

AI US 2003-696003 A1 20031029 (10)

RLI Division of Ser. No. US 2001-27421, filed on 20 Dec 2001, GRANTED, Pat. No. US 6670645 Continuation-in-part of Ser. No. US 2001-879014, filed on 12 Jun 2001, ABANDONED

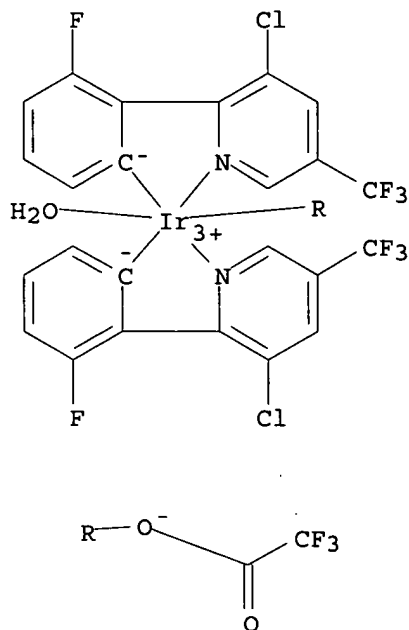
PRAI US 2000-215362P 20000630 (60)

US 2000-224273P 20000810 (60)

10724766

1/04/05

DT Utility  
FS APPLICATION  
LREP E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT RECORDS CENTER, BARLEY  
MILL PLAZA 25/1128, 4417 LANCASTER PIKE, WILMINGTON, DE, 19805  
CLMN Number of Claims: 11  
ECL Exemplary Claim: 1  
DRWN 1 Drawing Page(s)  
LN.CNT 1667  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
IT 387859-65-6P  
(electroluminescent devices based on iridium compds. with fluorinated  
phenylpyridines and phenylpyrimidines and phenylquinolines and the  
compds. and their precursors)  
RN 387859-65-6 USPATFULL  
CN Iridium, aquabis[2-[3-chloro-5-(trifluoromethyl)-2-pyridinyl-κN]-3-  
fluorophenyl-κC](trifluoroacetato-κO)- (9CI) (CA INDEX  
NAME)



L11 ANSWER 5 OF 10 USPATFULL on STN  
AB The present invention is generally directed to electroluminescent  
Ir(III) compounds, the substituted 2-phenylpyridines, phenylpyrimidines,  
and phenylquinolines that are used to make the Ir(III) compounds, and  
devices that are made with the Ir(III) compounds.

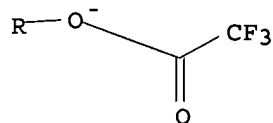
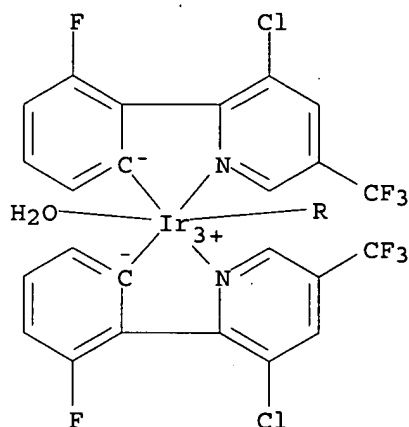
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AN 2004:138835 USPATFULL  
TI Electroluminescent iridium compounds with fluorinated phenylpyridines,  
phenylpyrimidines, and phenylquinolines and devices made with such  
compounds  
IN Grushin, Vladimir, Hockessin, DE, UNITED STATES  
Lecloux, Daniel D., Buellton, CA, UNITED STATES  
Petrov, Viacheslav A., Hockessin, DE, UNITED STATES  
Wang, Ying, Wilmington, DE, UNITED STATES

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1/04/05

PI US 2004106007 A1 20040603  
AI US 2003-696095 A1 20031029 (10)  
RLI Division of Ser. No. US 2001-27421, filed on 20 Dec 2001, GRANTED, Pat.  
No. US 6670645 Continuation-in-part of Ser. No. US 2001-879014, filed on  
12 Jun 2001, ABANDONED  
PRAI US 2000-215362P 20000630 (60)  
US 2000-224273P 20000810 (60)  
DT Utility  
FS APPLICATION  
LREP E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT RECORDS CENTER, BARLEY  
MILL PLAZA 25/1128, 4417 LANCASTER PIKE, WILMINGTON, DE, 19805  
CLMN Number of Claims: 11  
ECL Exemplary Claim: 1  
DRWN 1 Drawing Page(s)  
LN.CNT 1682  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
IT 387859-65-6P  
(electroluminescent devices based on iridium compds. with fluorinated  
phenylpyridines and phenylpyrimidines and phenylquinolines and the  
compds. and their precursors)  
RN 387859-65-6 USPATFULL  
CN Iridium, aquabis[2-[3-chloro-5-(trifluoromethyl)-2-pyridinyl-κN]-3-  
fluorophenyl-κC](trifluoroacetato-κO)- (9CI) (CA INDEX  
NAME)



L11 ANSWER 6 OF 10 USPATFULL on STN

AB The present invention is generally directed to electroluminescent  
Ir(III) compounds, the substituted 2-phenylpyridines, phenylpyrimidines,  
and phenylquinolines that are used to make the Ir(III) compounds, and  
devices that are made with the Ir(III) compounds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AN 2004:124799 USPATFULL

10724766

1/04/05

TI Electroluminescent iridium compounds with fluorinated phenylpyridines, phenylprimidines, and phenylquinolines and devices made with such compounds

IN Grushin, Vladimir, Hockessin, DE, UNITED STATES  
Lecloux, Daniel D., Buellton, CA, UNITED STATES  
Petrov, Viacheslav A., Hockessin, DE, UNITED STATES  
Wang, Ying, Wilmington, DE, UNITED STATES

PI US 2004094769 A1 20040520

AI US 2003-699411 A1 20031030 (10)

RLI Continuation of Ser. No. US 2001-27421, filed on 20 Dec 2001, GRANTED, Pat. No. US 6670645 Continuation-in-part of Ser. No. US 2001-879014, filed on 12 Jun 2001, ABANDONED

PRAI US 2000-215362P 20000630 (60)  
US 2000-224273P 20000810 (60)

DT Utility

FS APPLICATION

LREP E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT RECORDS CENTER, BARLEY MILL PLAZA 25/1128, 4417 LANCASTER PIKE, WILMINGTON, DE, 19805

CLMN Number of Claims: 11

ECL Exemplary Claim: 1

DRWN 1 Drawing Page(s)

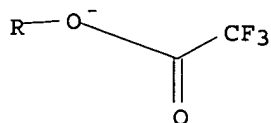
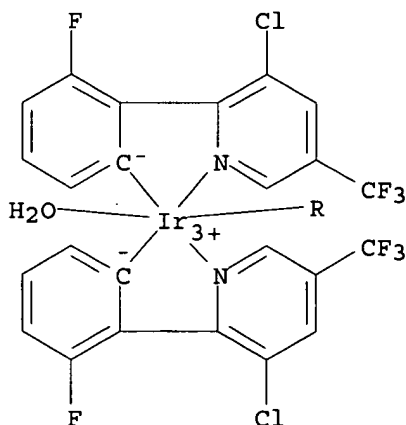
LN.CNT 1683

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **387859-65-6P**  
(electroluminescent devices based on iridium compds. with fluorinated phenylpyridines and phenylpyrimidines and phenylquinolines and the compds. and their precursors)

RN 387859-65-6 USPATFULL

CN Iridium, aquabis[2-[3-chloro-5-(trifluoromethyl)-2-pyridinyl-κN]-3-fluorophenyl-κC](trifluoroacetato-κO) - (9CI) (CA INDEX NAME)



L11 ANSWER 7 OF 10 USPATFULL on STN

10724766

1/04/05

AB The present invention is generally directed to electroluminescent Ir(III) compounds, the substituted 2-phenylpyridines, phenylpyrimidines, and phenylquinolines that are used to make the Ir(III) compounds, and devices that are made with the Ir(III) compounds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AN 2004:118473 USPATFULL

TI Electroluminescent iridium compounds with fluorinated phenylpyridines, phenylpyrimidines, and phenylquinolines and devices made with such compounds

IN Grushin, Vladimir, Hockessin, DE, UNITED STATES  
Lecloux, Daniel David, Buellton, CA, UNITED STATES  
Petrov, Viacheslav A., Hockessin, DE, UNITED STATES  
Wang, Ying, Wilmington, DE, UNITED STATES

PI US 2004089867 A1 20040513

AI US 2003-696349 A1 20031029 (10)

RLI Division of Ser. No. US 2001-27421, filed on 20 Dec 2001, GRANTED, Pat. No. US 6670645 Continuation-in-part of Ser. No. US 2001-879014, filed on 12 Jun 2001, ABANDONED

PRAI US 2000-215362P 20000630 (60)

US 2000-224273P 20000810 (60)

DT Utility

FS APPLICATION

LREP E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT RECORDS CENTER, BARLEY MILL PLAZA 25/1128, 4417 LANCASTER PIKE, WILMINGTON, DE, 19805

CLMN Number of Claims: 11

ECL Exemplary Claim: 1

DRWN 1 Drawing Page(s)

LN.CNT 1680

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

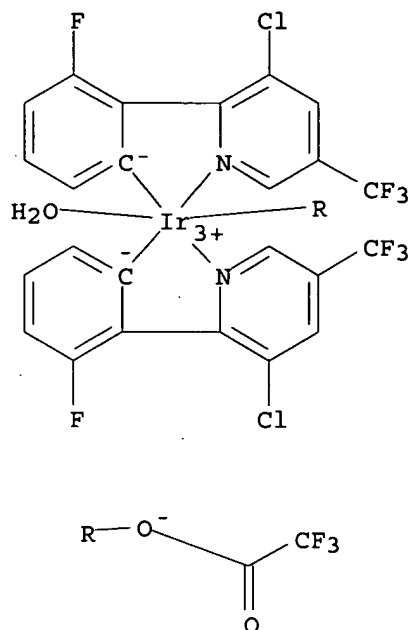
IT 387859-65-6P

(electroluminescent devices based on iridium compds. with fluorinated phenylpyridines and phenylpyrimidines and phenylquinolines and the compds. and their precursors)

RN 387859-65-6 USPATFULL

CN Iridium, aquabis[2-[3-chloro-5-(trifluoromethyl)-2-pyridinyl-κN]-3-fluorophenyl-κC](trifluoroacetato-κO)- (9CI) (CA INDEX NAME)

1/04/05



L11 ANSWER 8 OF 10 USPATFULL on STN

AB The present invention is generally directed to electroluminescent Ir(III) compounds, the substituted 2-phenylpyridines, phenylpyrimidines, and phenylquinolines that are used to make the Ir(III) compounds, and devices that are made with the IR(III) compounds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AN 2004:99243 USPATFULL

TI Electroluminescent iridium compounds with fluorinated phenylpyridines, phenylpyrimidines, and phenylquinolines and devices made with such compounds

IN Grushin, Vladimir, Hockessin, DE, UNITED STATES  
Petrov, Viacheslav A., Hockessin, DE, UNITED STATES  
Wang, Ying, Wilmington, DE, UNITED STATES

PI US 2004075096 A1 20040422

AI US 2003-720967 A1 20031124 (10)

RLI Division of Ser. No. US 2003-366295, filed on 13 Feb 2003, PENDING

Continuation of Ser. No. US 2001-879014, filed on 12 Jun 2001, ABANDONED

PRAI US 2000-215362P 20000630 (60)

US 2000-224274P 20000810 (60)

DT Utility

FS APPLICATION

LREP E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT RECORDS CENTER, BARLEY MILL PLAZA 25/1128, 4417 LANCASTER PIKE, WILMINGTON, DE, 19805

CLMN Number of Claims: 22

ECL Exemplary Claim: 1

DRWN 1 Drawing Page(s)

LN.CNT 1153

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 387859-65-6P

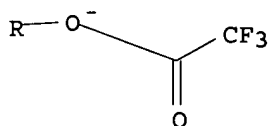
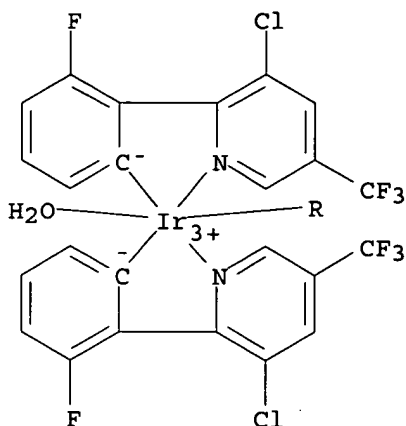
(electroluminescent devices based on iridium compds. with fluorinated phenylpyridines and phenylpyrimidines and phenylquinolines and the compds. and their precursors)

RN 387859-65-6 USPATFULL

10724766

1/04/05

CN Iridium, aquabis[2-[3-chloro-5-(trifluoromethyl)-2-pyridinyl-κN]-3-fluorophenyl-κC](trifluoroacetato-κO)- (9CI) (CA INDEX NAME)



L11 ANSWER 9 OF 10 USPATFULL on STN

AB The present invention is generally directed to electroluminescent Ir(III) compounds, the substituted 2-phenylpyridines, phenylpyrimidines, and phenylquinolines that are used to make the Ir(III) compounds, and devices that are made with the Ir(III) compounds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AN 2003:280846 USPATFULL

TI Electroluminescent iridium compounds with fluorinated phenylpyridines, phenylpyrimidines, and phenylquinolines and devices made with such compounds

IN Grushin, Vladimir, Hockessin, DE, UNITED STATES

Petrov, Viacheslav A., Hockessin, DE, UNITED STATES

Wang, Ying, Wilmington, DE, UNITED STATES

PI US 2003197183 A1 20031023

AI US 2003-366295 A1 20030213 (10)

RLI Continuation of Ser. No. US 2001-879014, filed on 12 Jun 2001, PENDING

PRAI US 2000-215362P 20000630 (60)

US 2000-224273P 20000810 (60)

DT Utility

FS APPLICATION

LREP E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT RECORDS CENTER, BARLEY MILL PLAZA 25/1128, 4417 LANCASTER PIKE, WILMINGTON, DE, 19805

CLMN Number of Claims: 22

ECL Exemplary Claim: 1

DRWN 1 Drawing Page(s)

LN.CNT 1161

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 387859-65-6P

10724766

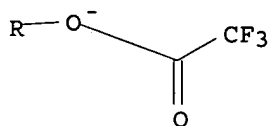
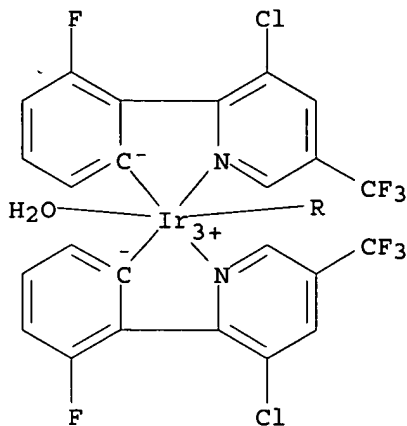


1/04/05

(electroluminescent devices based on iridium compds. with fluorinated phenylpyridines and phenylpyrimidines and phenylquinolines and the compds. and their precursors)

RN 387859-65-6 USPATFULL

CN Iridium, aquabis[2-[3-chloro-5-(trifluoromethyl)-2-pyridinyl-κN]-3-fluorophenyl-κC](trifluoroacetato-κO)- (9CI) (CA INDEX NAME)



L11 ANSWER 10 OF 10 USPATFULL on STN

AB The present invention is generally directed to electroluminescent Ir(III) compounds, the substituted 2-phenylpyridines, phenylpyrimidines, and phenylquinolines that are used to make the Ir(III) compounds, and devices that are made with the Ir(III) compounds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AN 2002:226505 USPATFULL

TI Electroluminescent iridium compounds with fluorinated phenylpyridines, phenylpyrimidines, and phenylquinolines and devices made with such compounds

IN Grushin, Vladimir, Hockessin, DE, UNITED STATES  
Petrov, Viacheslav A., Hockessin, DE, UNITED STATES  
Wang, Ying, Wilmington, DE, UNITED STATES

PI US 2002121638 A1 20020905

AI US 2001-879014 A1 20010612 (9)

PRAI US 2000-215362P 20000630 (60)

US 2000-224273P 20000810 (60)

DT Utility

FS APPLICATION

LREP E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT RECORDS CENTER, BARLEY MILL PLAZA 25/1128, 4417 LANCASTER PIKE, WILMINGTON, DE, 19805

CLMN Number of Claims: 22

ECL Exemplary Claim: 1

DRWN 1 Drawing Page(s)

10724766

1/04/05

LN.CNT 1166

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 387859-65-6P

(electroluminescent devices based on iridium compds. with fluorinated phenylpyridines and phenylpyrimidines and phenylquinolines and the compds. and their precursors)

RN 387859-65-6 USPATFULL

CN Iridium, aquabis[2-[3-chloro-5-(trifluoromethyl)-2-pyridinyl-κN]-3-fluorophenyl-κC](trifluoroacetato-κO)-(9CI) (CA INDEX NAME)

